



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	-----------------------	---------------------	------------------

10/798,933

03/11/2004

John Wissinger

4623N-000017

6934

27572 7590 10/18/2007
HARNESSE, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

AYRES, TIMOTHY MICHAEL

ART UNIT

PAPER NUMBER

3637

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,933

Applicant(s)

WISSINGER ET AL.

Examiner

Timothy M. Ayres

Art Unit

3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-26 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-26 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 8/03/07. These drawings are acceptable.

Claim Objections

2. Claim 24-26 are objected to because the first pivot axis has not been defined in a previous claim. For examination purposes, the first pivot axis is considered to have the same structure as recited in claim 2. Also in claim 25, the cam follower has not been defined in a previous claim.

Claim Rejections - 35 USC § 102

3. Claim 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 7,097,213 to Antos. Antos teaches a refrigerator (10) with a latching armament (30,40). The latching arrangement (40) is located in a recess of a cap portion (28) at the top of the refrigerator door (14). The latching arrangement (30) is composed of a handle (44), pawl (46), and striker (32). The handle (44) drives the pawl (46) to rotate around a fixed axis (42) to engage or disengage from the striker (32) on the housing. The handle (44) and pawl (46) is concealed behind a perimeter of the door as best seen in figures 2 and 5.

Claim Rejections - 35 USC § 103

4. Claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of US Patent 7,097,213 to Antos. Rop teaches a refrigerator that comprises a housing with a door pivotally coupled to the housing and particularly focusing on the embodiment seen in figures 4-7. A striker (11a, 12a, 13a) is connected to the housing. A latching arrangement is carried by the door and includes a handle (20a) connected to the door for movement between a first position and a second position. The handle has a first free end attached to the first pivot as seen in figure 7 and a second free end located proximate the cam follower (19a). The handle (20a) defines a cam surface (24a) that is a pin. A pawl (18a, 16a, 17a) is connected to the door for movement between a latched position that is engaged with the striker for securing the door in a closed position and an unlatched position allowing the door to be pivoted from the closed position. The pawl including a cam follower (19a) that is a curved slot and is driven in arcuate path around a second pivot axis (15a) by the cam surface (24a) and thereby rotates the pawl from the latched position (Fig 4) to the unlatched position (Fig 5). The pawl is pivotally connected to the door for rotation about a second pivot axis (15a). A biasing element (22a) biases the handle via the slot and pin arrangement of the pawl. The latching arrangement is located at an edge of the door and the handle is generally parallel to the face of the door. The cam surface (24a) is the surface of a pin and therefore is curved. A line can be drawn between the first and second pivot axis making them located along said line and the line would be substantially parallel to a front face of the door. As

Art Unit: 3637

seen in figure 7, the pawl and a portion of the handle are disposed in a housing on the door and is considered a portion of the door and therefore a recess of the door.

Therefore the latching arrangement is considered disposed in the recess of the door.

Also it is substantially hidden from view since most of the latching arrangement is in the recess and is considered almost completely hidden from view since the perimeter of the door and the back surface of the door conceals the handle when the door is open and viewed from the side or back of the door.

5. Rop does not expressly disclose a cap portion defining a recess disposed within the door. Antos teaches a refrigerator (10) with a latching arrangement (30,40). The latching arrangement (40) is located in a recess of a cap portion (28) at the top of the refrigerator door (14). The latching arrangement (30) is composed of a handle (44), pawl (46), and striker (32). The handle (44) drives the pawl (46) to rotate around a fixed axis (42) to engage or disengage from the striker (32) on the housing. The handle (44) and pawl (46) is concealed behind a perimeter of the door as best seen in figures 2 and

5. At the time of the time of the invention it would have been obvious for a person of ordinary skill in the art to modify the refrigerator of Rop by adding the cap portion to the side or top of the refrigerator as taught by Autos to conceal controls or to allow a finger grip portion of the door while opening. The examiner also considered the cap portion to aid in the aesthetics of the door.

6. Regarding claims 9, 10, 18, 19 and 26, Rop in view of Antos discloses every element as claimed except that the handle having a slot curved along its length to define the cam surface and the second pivot axis as being vertical. It would have been

Art Unit: 3637

obvious for a person of ordinary skill in the art to modify the latching arrangement of Rop by having the making the cam surface the curved slot (19a) on the handle and the cam follower the pin (15a) on the pawls, since applicant has not disclosed that having the slots and the cam follower in these locations solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the curved cam surface of the slots being on the pawl and the cam follower being the curved pin on the handle since it is functionally equivalent and works equally well. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

7. Regarding claim 26, Rop in view of Antos does not expressly disclose the second pivot axis as being vertical. The embodiment as seen in figures 1-3 of Rop have the second pivot axis vertical. It would have been obvious for a person of ordinary skill in the art to modify Rob by having rotating the sticker and pawl so they function as seen in figures 1-3, since applicant has not disclosed that having the second pivot axis vertical solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the second pivot axis horizontal since it is functionally equivalent and works equally well.

8. The axes are considered to be rearward of a front face of the door since as in figure 7 and further compared with figure 10 the front face of the door has an arcuate shape such that the center of the door bows out from the end making the axis toward the rearward of the center bowed section on the front face of the door.

Art Unit: 3637

9. Claims 7, 8, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of US Patent 7,097,213 to Antos as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 5,906,423 to Lyu. Rop in view of Antos discloses every element as claimed except a leaf spring carried by the handle for biasing the handle. Lyu teaches a handle for a refrigerator that includes a first pivot axis at a first free end (24) and proximate to the second end is a leaf spring (61) in contact with a ledge (20b) of the handle (20) to force the handle to a first position. The handle (20) is configured as a pull handle in that the handle is moved away from the door to help the door open. At the time of the invention it would have been obvious for a person of ordinary skill in the art to make the handle as Rop a pull handle as taught in the embodiment in figure 8 and 9, but use the same slot and pin structure of the embodiment of figures 4-7. This is done by mirroring the slots around the pin so that when the pin is moved with the handle, the slots are driven and thereby cause the pawls to rotate and the motivation for this is that it will be easier to unlatch the door since it is the same motion as needed to continue to open the door. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

10. At the time of the invention it would have been obvious to modify the modified latching arrangement of Rop in view of Antos by adding in a leaf spring and ledge as taught by Lyu to help return the handle to the latched position.

Art Unit: 3637

11. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of US Patent 7,097,213 to Antos as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 2,172,467 to Geddes. Rop in view of Antos discloses every element as claimed and discussed above except the curved slot being defined by a pair of fingers. Geddes teaches a refrigerator latch with a lever arm (18) with a slot (19) defined by a pair of fingers on both sides of the slot (19) that have a cam surface that engage a cam follower (20). At the time of the invention it would have been obvious for a person of ordinary skill to modify the handle of Rop in view of Antos by having the slots being open at one end as taught by Geddes, which will make the latching arrangement easier to assemble and once assembled is functionally equivalent and works equally well.

12. Claims 1-6, 9, 10, 12, 14, 15, 18, 19, 24-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,097,213 to Antos in view of US Patent 2,948,560 to Rop. Antos teaches a refrigerator (10) with a latching arrangement (30,40). The latching arrangement (40) is located in a recess of a cap portion (28) at the top of the refrigerator door (14). The latching arrangement (30) is composed of a handle (44), pawl (46), and striker (32). The handle (44) drives the pawl (46) to rotate around a fixed axis (42) to engage or disengage from the striker (32) on the housing. The handle (44) and pawl (46) is concealed behind a perimeter of the door as best seen in figures 2 and 5.

Art Unit: 3637

13. Antos does not expressly disclose the pawl and handle being separated entities with a cam surfaces connecting the handle and pawl.

14. Rop teaches a refrigerator that comprises a housing with a door pivotally coupled to the housing and particularly focusing on the embodiment seen in figures 4-7. A striker (11a, 12a, 13a) is connected to the housing. A latching arrangement is carried by the door and includes a handle (20a) connected to the door for movement between a first position and a second position. The handle has a first free end attached to the first pivot as seen in figure 7 and a second free end located proximate the cam follower (19a). The handle (20a) defines an cam surface (24a) that is a pin. A pawl (18a, 16a, 17a) is connected to the door for movement between a latched position that is engaged with the striker for securing the door in a closed position and an unlatched position allowing the door to be pivoted from the closed position. The pawl including a cam follower (19a) that is a curved slot and is driven in arcuate path around a second pivot axis (15a) by the cam surface (24a) and thereby rotates the pawl from the latched position (Fig 4) to the unlatched position (Fig 5). The pawl is pivotally connected to the door for rotation about a second pivot axis (15a). A biasing element (22a) biases the handle via the slot and pin arrangement of the pawl. The latching arrangement is located at an edge of the door and the handle is generally parallel to the face of the door. The cam surface (24a) is the surface of a pin and therefore is curved. A line can be drawn between the first and seconds pivot axis making them located along said line and the line would be substantially parallel to a front face of the door. As seen in figure 7, the pawl and a portion of the handle are disposed in a housing on the door and is considered a portion

Art Unit: 3637

of the door and therefore a recess of the door. Therefore the latching arrangement is considered disposed in the recess of the door. Also it is substantially hidden from view since most of the latching arrangement is in the recess and is considered almost completely hidden from view since the perimeter of the door and the back surface of the door conceals the handle when the door is open and viewed from the side or back of the door.

15. At the time of the invention it would have been obvious for a person of ordinary skill in the art to modify the latching arrangement of Antos by using a separate pawl and handles rotating around vertical axis as taught by Rop to allow the door to be only partial closed since the latch mechanism will pull the door tightly closed.

16. Regarding claims 9, 10, 18, 19 and 26, Autos in view of Rop discloses every element as claimed except that the handle having a slot curved along its length to define the cam surface and the second pivot axis as being vertical. It would have been obvious for a person of ordinary skill in the art to modify the latching arrangement of Rop by having the making the cam surface the curved slot (19a) on the handle and the cam follower the pin (15a) on the pawls, since applicant has not disclosed that having the slots and the cam follower in these locations solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the curved cam surface of the slots being on the pawl and the cam follower being the curved pin on the handle since it is functionally equivalent and works equally well. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

Art Unit: 3637

17. Regarding claim 26, Antos in view of Rop does not expressly disclose the second pivot axis as being vertical. The embodiment as seen in figures 1-3 of Rop have the second pivot axis vertical. It would have been obvious for a person of ordinary skill in the art to modify Rob by having rotating the sticker and pawl so they function as seen in figures 1-3, since applicant has not disclosed that having the second pivot axis vertical solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the second pivot axis horizontal since it is functionally equivalent and works equally well.

18. The axes are considered to be rearward of a front face of the door since as in figure 7 and further compared with figure 10 the front face of the door has an arcuate shape such that the center of the door bows out from the end making the axis toward the rearward of the center bowed section on the front face of the door.

19. Claims 7, 8, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,097,213 to Antos in view of US Patent 2,948,560 to Rop as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 24-26, and 29 above, and further in view of US Patent 5,906,423 to Lyu. Antos in view of Rop discloses every element as claimed except a leaf spring carried by the handle for biasing the handle. Lyu teaches a handle for a refrigerator that includes a first pivot axis at a first free end (24) and proximate to the second end is a leaf spring (61) in contact with a ledge (20b) of the handle (20) to force the handle to a first position. The handle (20) is configured as a pull handle in that the handle is moved away from the door to help the door open. At the

Art Unit: 3637

time of the invention it would have been obvious for a person of ordinary skill in the art to make the handle as Rop a pull handle as taught in the embodiment in figure 8 and 9, but use the same slot and pin structure of the embodiment of figures 4-7. This is done by mirroring the slots around the pin so that when the pin is moved with the handle, the slots are driven and thereby cause the pawls to rotate and the motivation for this is that it will be easier to unlatch the door since it is the same motion as needed to continue to open the door. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

At the time of the invention it would have been obvious to modify the modified latching arrangement of Antos in view of Rop by adding in a leaf spring and ledge as taught by Lyu to help return the handle to the latched position.

20. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,097,213 to Antos in view of US Patent 2,948,560 to Rop as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 24-26, and 29 above, and further in view of US Patent 2,172,467 to Geddes. Antos in view of Rop discloses every element as claimed and discussed above except the curved slot being defined by a pair of fingers. Geddes teaches a refrigerator latch with a lever arm (18) with a slot (19) defined by a pair fingers on both sides of the slot (19) that have a cam surface that engage a cam follower (20). At the time of the invention it would have been obvious for a person of ordinary skill to modify the handle of Antos in view of Rop by having the slots being

Art Unit: 3637

open at one end as taught by Geddes, which will make the latching arrangement easier to assemble and once assembled is functionally equivalent and works equally well.

Response to Arguments

21. Applicant's arguments filed 7/16/07 have been considered but are moot in view of the new ground(s) of rejection. Due to the amendment to the claims the reference to Antos has been added. Antos teaches a cap portion on RV refrigerator with a latch arrangement with the same functional advantages as this application.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

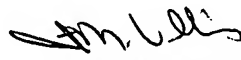
Art Unit: 3637

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Ayres whose telephone number is (571) 272-8299. The examiner can normally be reached on MON-THU 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TMA
10/15/07


JANET M. WILKENS
PRIMARY EXAMINER
AU 3637